

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: INVUE

Report Number: P401834

Luminaire Tested: **ENT-SA1F-735-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401834
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-7)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-735-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3500K, 1200mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6467 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

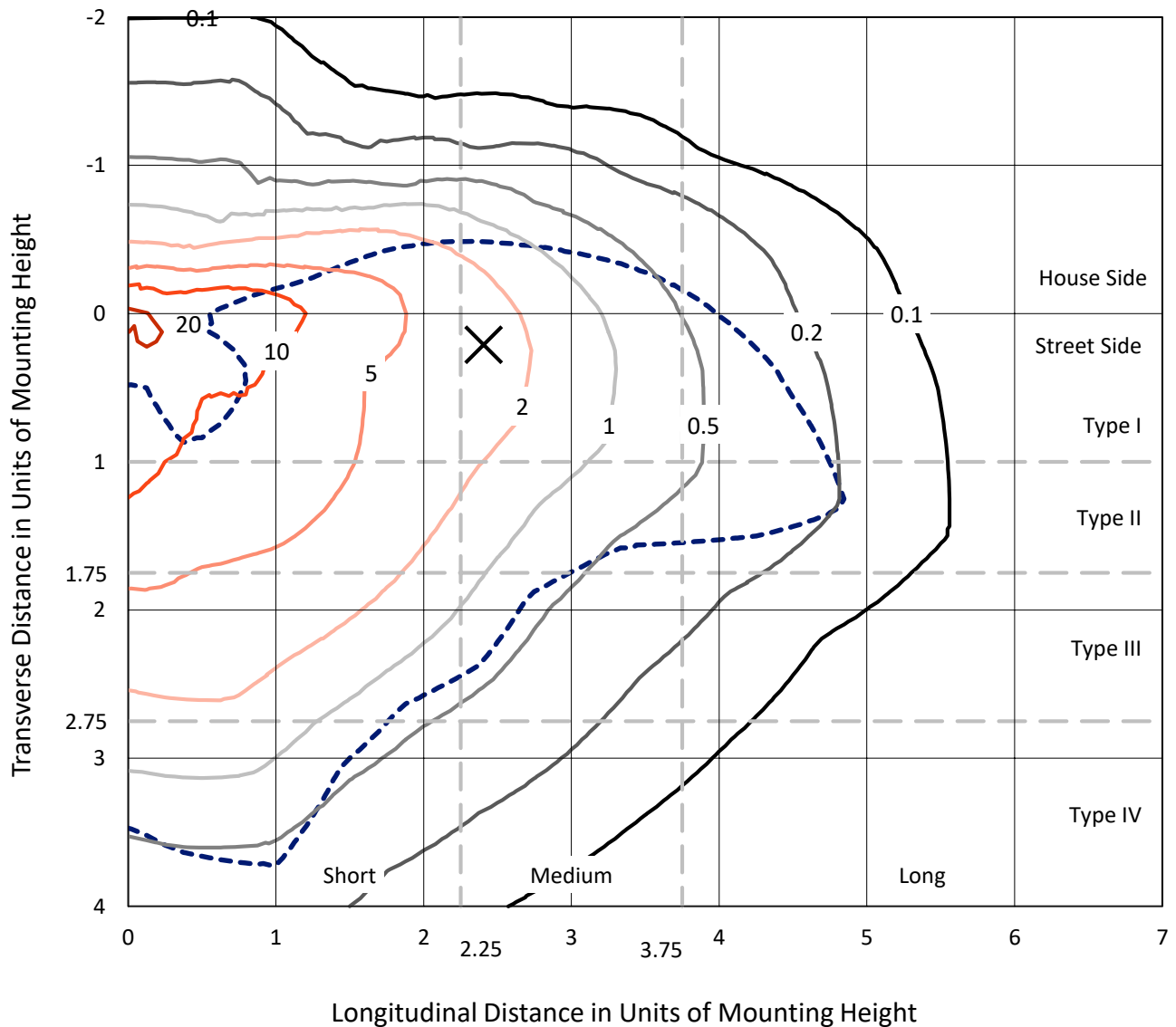
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

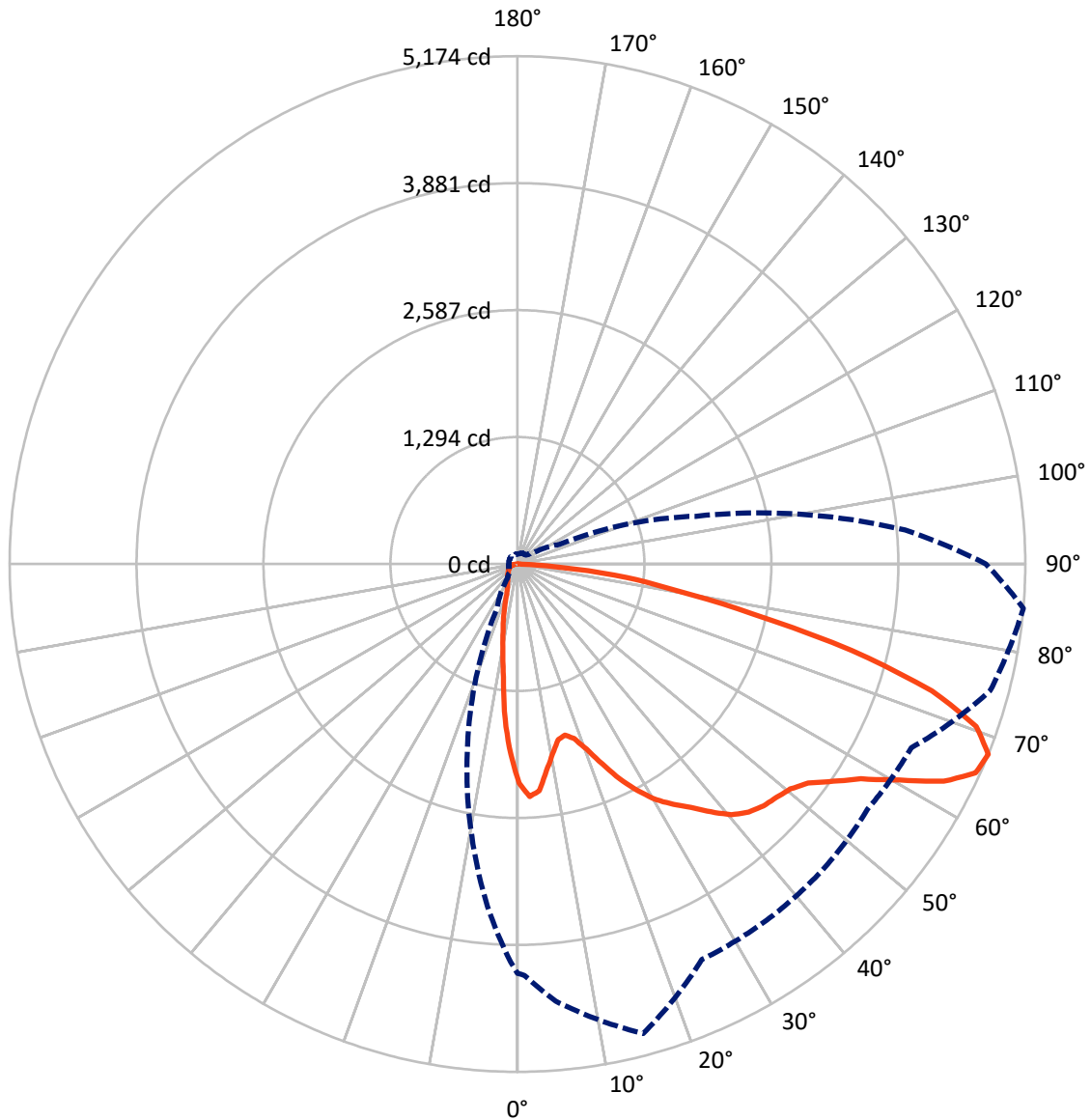
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 23.9 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 85-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1303.0	0.0	1303.0
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	5164.0	0.0	5164.0
	% Fixture	79.9	0.0	79.9
Total	Lumens	6467.0	0.0	6467.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.9	2.6
10°-20°	335.0	5.2
20°-30°	468.1	7.2
30°-40°	659.8	10.2
40°-50°	914.3	14.1
50°-60°	1284.8	19.9
60°-70°	1570.6	24.3
70°-80°	923.1	14.3
80°-90°	141.4	2.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	6467.0	100.0
0°-180°	6467.0	100.0



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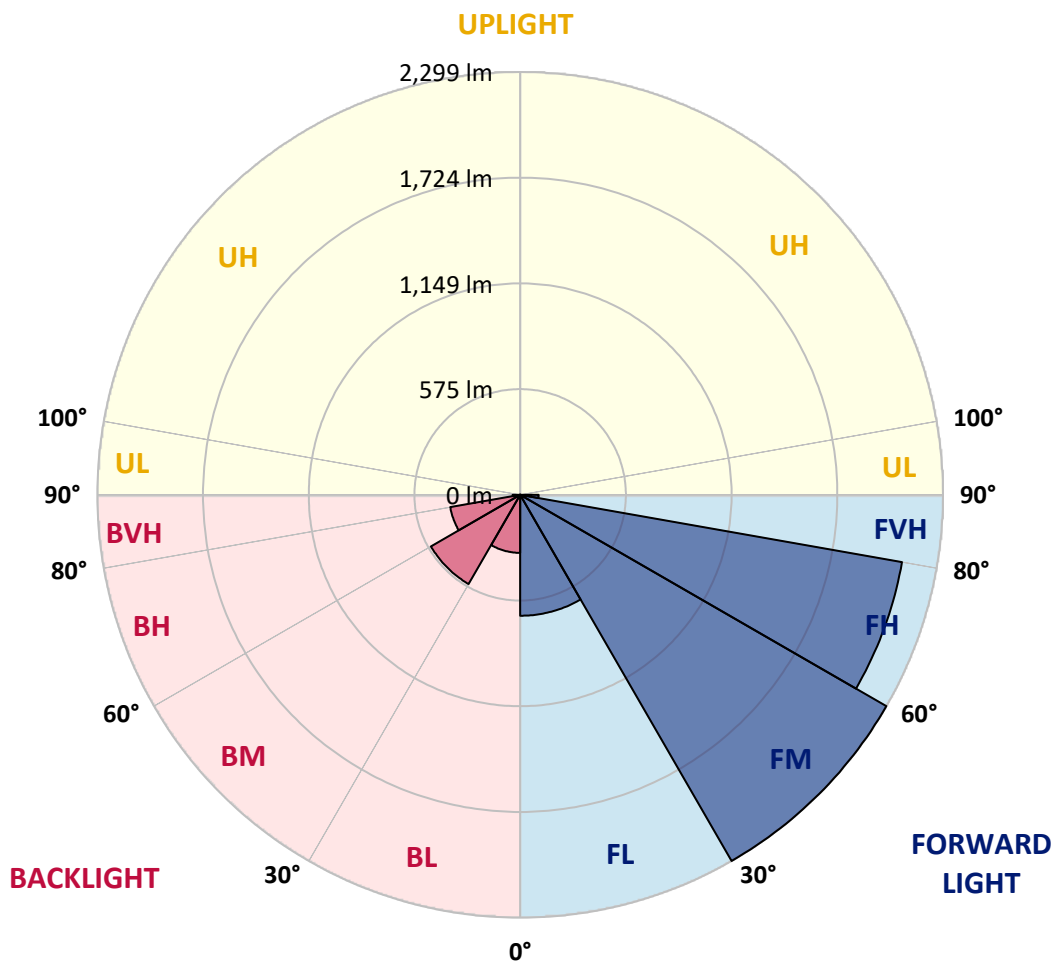
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	657.4	10.2			
FM	(30°-60°)	2298.8	35.5			
FH	(60°-80°)	2107.8	32.6			G2/5000
FVH	(80°-90°)	100.0	1.5			G2/225
BL	(0°-30°)	315.6	4.9	B1/500		
BM	(30°-60°)	560.2	8.7	B1/1000		
BH	(60°-80°)	386.0	6.0	B1/500		G1/500
BVH	(80°-90°)	41.3	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°	
0°	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2
2.5°	2295.6	2285.2	2320.5	2372.5	2407.8	2432.8	2441.1	2440.1	2432.8	2413.0	2371.5	2371.5
5°	2193.7	2184.3	2256.1	2371.5	2472.3	2545.1	2565.9	2536.8	2500.4	2423.4	2321.6	2321.6
7.5°	2000.3	2014.9	2106.3	2268.5	2430.7	2546.1	2574.2	2528.5	2453.6	2296.6	2125.1	2125.1
10°	1853.7	1861.0	1963.9	2159.4	2332.0	2450.5	2499.3	2458.8	2361.1	2162.5	1963.9	1963.9
12.5°	1763.3	1770.5	1870.3	2051.2	2235.3	2327.8	2342.4	2341.3	2260.2	2067.9	1838.1	1838.1
15°	1775.7	1785.1	1884.9	2034.6	2138.6	2179.1	2180.2	2191.6	2167.7	2021.1	1808.0	1808.0
17.5°	1896.3	1896.3	1992.0	2082.4	2058.5	2029.4	2051.2	2072.0	2113.6	2049.2	1869.3	1869.3
20°	2086.6	2094.9	2183.3	2167.7	2022.1	1949.4	1923.4	1959.8	2088.7	2133.4	2013.8	2013.8
22.5°	2292.4	2314.3	2406.8	2292.4	2015.9	1874.5	1845.4	1884.9	2091.8	2266.5	2212.4	2212.4
25°	2520.1	2547.2	2609.5	2438.0	2034.6	1832.9	1813.2	1850.6	2100.1	2389.1	2426.6	2426.6
27.5°	2728.1	2730.1	2791.5	2560.7	2083.5	1837.1	1803.8	1852.7	2123.0	2485.8	2615.8	2615.8
30°	2875.7	2875.7	2902.7	2623.1	2143.8	1863.1	1812.1	1883.9	2155.2	2538.8	2787.3	2787.3
32.5°	3010.9	3018.1	3004.6	2688.6	2201.0	1900.5	1831.9	1946.2	2206.2	2582.5	2919.4	2919.4
35°	3182.4	3181.4	3121.1	2740.5	2254.0	1941.0	1880.7	2025.3	2280.0	2647.0	3045.2	3045.2
37.5°	3394.5	3384.1	3256.2	2787.3	2318.4	2010.7	1973.3	2133.4	2378.7	2722.9	3204.2	3204.2
40°	3586.8	3570.2	3379.9	2831.0	2369.4	2145.9	2124.0	2267.5	2503.5	2817.5	3359.1	3359.1
42.5°	3736.5	3711.6	3484.9	2862.2	2446.3	2357.9	2376.7	2508.7	2629.3	2901.7	3455.8	3455.8
45°	3862.3	3836.3	3564.0	2877.8	2632.4	2660.5	2696.9	2807.1	2763.4	2924.6	3515.1	3515.1
47.5°	3952.8	3910.2	3598.3	2923.5	2884.0	3014.0	3126.3	3133.5	2952.6	2923.5	3551.5	3551.5
50°	4005.8	3959.0	3630.5	3036.8	3176.2	3415.3	3534.8	3478.7	3149.1	2942.2	3603.5	3603.5
52.5°	4112.9	4064.0	3764.6	3220.9	3475.6	3821.8	3886.2	3795.8	3352.9	3038.9	3707.4	3707.4
55°	4382.2	4360.3	4024.5	3468.3	3769.8	4150.3	4179.4	4089.0	3566.0	3206.3	3906.0	3906.0
57.5°	4686.8	4639.0	4375.9	3779.2	4051.6	4407.1	4453.9	4329.1	3789.6	3441.3	4127.4	4127.4
60°	4772.0	4762.7	4673.3	4142.0	4342.7	4681.6	4684.7	4525.6	4050.5	3720.9	4465.3	4465.3
62.5°	4647.3	4677.4	4797.0	4477.8	4587.0	4865.6	4839.6	4674.3	4323.9	4165.9	4876.0	4876.0
65°	4430.0	4472.6	4712.8	4794.9	4643.1	4829.2	4774.1	4669.1	4496.5	4645.2	5130.7	5130.7
67.5°	4169.0	4191.9	4471.6	4952.9	4446.6	4428.9	4403.0	4355.1	4427.9	4986.2	5174.4	5174.4
70°	3897.7	3917.4	4175.3	4735.6	3857.1	3654.4	3632.6	3591.0	3874.8	4982.0	4960.2	4960.2
72.5°	3285.3	3272.8	3510.9	3952.8	2945.4	2669.8	2854.9	2764.5	3134.6	4475.7	4418.5	4418.5
75°	2040.9	2109.5	2407.8	2771.7	2018.0	1828.8	2084.5	2061.6	2545.1	3854.0	3518.2	3518.2
77.5°	1243.4	1256.9	1425.4	1727.9	1215.4	1267.3	1340.1	1481.5	1887.0	3124.2	2452.6	2452.6
80°	650.8	605.1	728.8	948.2	721.5	850.4	982.5	1138.4	1197.7	2036.7	1639.5	1639.5
82.5°	188.2	187.1	246.4	397.1	342.0	417.9	495.9	715.3	784.9	1211.2	1122.8	1122.8
85°	1.0	1.0	1.0	2.1	3.1	5.2	21.8	184.0	243.3	561.4	461.6	461.6
87.5°	0.0	0.0	1.0	2.1	2.1	4.2	6.2	8.3	10.4	12.5	45.7	45.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2
2.5°	2357.9	2342.4	2309.1	2264.4	2233.2	2179.1	2167.7	2133.4	2099.1	2071.0	2072.0
5°	2272.7	2219.7	2138.6	2045.0	1955.6	1875.5	1859.9	1813.2	1799.6	1786.1	1748.7
7.5°	2049.2	1986.8	1873.5	1735.2	1622.9	1547.0	1465.9	1417.1	1373.4	1323.5	1336.0
10°	1877.6	1788.2	1632.3	1470.1	1329.7	1227.8	1138.4	1092.7	1029.3	983.5	977.3
12.5°	1745.6	1648.9	1461.8	1271.5	1139.5	1080.2	1023.0	951.3	880.6	820.3	789.1
15°	1701.9	1592.8	1375.5	1186.3	1082.3	1010.5	930.5	848.4	762.1	697.6	672.7
17.5°	1752.9	1623.9	1374.4	1149.9	1019.9	914.9	815.1	722.6	620.7	556.2	536.5
20°	1893.2	1732.1	1403.5	1115.6	944.0	801.6	661.2	561.4	457.4	411.7	390.9
22.5°	2088.7	1878.7	1448.2	1074.0	859.8	663.3	505.3	379.5	328.5	305.7	300.5
25°	2289.3	2064.8	1511.7	1038.6	767.3	528.1	362.8	303.6	279.7	269.3	269.3
27.5°	2509.7	2250.9	1580.3	996.0	671.6	393.0	295.3	267.2	254.7	248.5	247.4
30°	2688.6	2402.7	1658.3	946.1	585.3	322.3	262.0	243.3	231.8	228.7	228.7
32.5°	2817.5	2516.0	1740.4	896.2	506.3	291.1	243.3	226.6	214.2	212.1	212.1
35°	2968.2	2624.1	1777.8	868.1	458.5	271.4	229.8	213.1	201.7	196.5	196.5
37.5°	3149.1	2753.0	1798.6	841.1	437.7	252.6	220.4	201.7	190.3	184.0	184.0
40°	3378.9	2899.6	1820.4	814.1	425.2	237.0	210.0	191.3	181.9	174.7	174.7
42.5°	3543.2	3034.8	1837.1	791.2	403.4	229.8	201.7	184.0	172.6	166.3	165.3
45°	3629.4	3160.6	1844.4	777.7	378.4	236.0	195.5	177.8	164.3	158.0	157.0
47.5°	3687.7	3264.5	1853.7	767.3	358.7	224.6	194.4	171.5	158.0	149.7	149.7
50°	3780.2	3401.8	1877.6	747.5	347.2	210.0	210.0	168.4	150.8	143.5	142.4
52.5°	3945.5	3598.3	1942.1	725.7	334.8	195.5	216.2	169.5	145.6	137.2	135.2
55°	4195.0	3911.2	2049.2	694.5	317.1	177.8	201.7	170.5	140.4	133.1	130.0
57.5°	4519.4	4289.6	2173.9	669.5	286.9	163.2	184.0	165.3	134.1	127.9	125.8
60°	4737.7	4542.3	2252.9	637.3	244.3	153.9	158.0	160.1	127.9	120.6	119.6
62.5°	4855.2	4546.4	2254.0	592.6	204.8	145.6	141.4	163.2	122.7	113.3	112.3
65°	4863.5	4325.0	2140.7	535.4	191.3	136.2	130.0	144.5	117.5	108.1	107.1
67.5°	4773.1	3964.2	1881.8	469.9	196.5	128.9	120.6	121.6	111.2	102.9	101.9
70°	4448.7	3497.4	1509.6	417.9	197.5	119.6	113.3	110.2	105.0	97.7	95.6
72.5°	3838.4	2922.5	1143.6	401.3	200.7	112.3	105.0	101.9	97.7	91.5	89.4
75°	2896.5	2280.0	858.8	374.3	202.7	104.0	95.6	93.6	89.4	83.2	82.1
77.5°	2001.3	1690.5	596.8	316.1	180.9	94.6	86.3	84.2	81.1	74.9	73.8
80°	1351.6	1159.2	366.0	237.0	137.2	83.2	74.9	74.9	71.7	65.5	65.5
82.5°	940.9	866.0	211.1	154.9	99.8	68.6	65.5	65.5	62.4	56.1	55.1
85°	393.0	524.0	94.6	84.2	69.7	54.1	54.1	55.1	52.0	46.8	45.7
87.5°	13.5	56.1	37.4	39.5	41.6	37.4	41.6	41.6	40.5	36.4	35.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2
2.5°	2041.9	2028.4	1986.8	1981.6	1950.4	1948.3	1961.8	1939.0	1941.0	1969.1	1965.0
5°	1757.0	1725.8	1724.8	1690.5	1652.0	1642.7	1609.4	1596.9	1591.7	1580.3	1621.9
7.5°	1374.4	1359.9	1372.3	1368.2	1332.8	1313.1	1242.4	1188.3	1161.3	1172.7	1175.9
10°	977.3	999.1	1032.4	1064.6	1039.7	974.2	944.0	900.3	895.1	892.0	912.8
12.5°	774.5	749.6	765.2	776.6	752.7	724.6	712.2	693.5	703.8	727.8	741.3
15°	643.5	599.9	580.1	566.6	572.9	556.2	562.5	556.2	563.5	570.8	595.7
17.5°	508.4	492.8	455.4	437.7	438.7	431.5	433.5	432.5	428.3	445.0	464.7
20°	382.6	378.4	370.1	357.6	359.7	354.5	351.4	333.7	326.5	331.7	348.3
22.5°	298.4	303.6	308.8	307.7	312.9	299.4	286.9	271.4	269.3	270.3	274.5
25°	267.2	269.3	273.4	278.6	281.7	269.3	251.6	242.2	241.2	243.3	243.3
27.5°	248.5	246.4	251.6	257.8	262.0	246.4	231.8	223.5	221.4	219.4	218.3
30°	228.7	228.7	232.9	239.1	242.2	228.7	216.2	207.9	202.7	199.6	198.6
32.5°	214.2	215.2	217.3	221.4	226.6	213.1	202.7	195.5	186.1	183.0	180.9
35°	197.5	201.7	204.8	205.9	210.0	200.7	190.3	178.8	170.5	167.4	167.4
37.5°	184.0	187.1	192.3	191.3	194.4	188.2	176.7	164.3	160.1	159.1	158.0
40°	173.6	173.6	177.8	181.9	186.1	174.7	161.1	154.9	151.8	149.7	150.8
42.5°	164.3	163.2	163.2	170.5	177.8	161.1	149.7	145.6	144.5	142.4	143.5
45°	155.9	154.9	151.8	154.9	165.3	147.6	140.4	137.2	136.2	136.2	136.2
47.5°	148.7	146.6	142.4	143.5	150.8	137.2	131.0	130.0	128.9	128.9	130.0
50°	140.4	138.3	135.2	134.1	136.2	130.0	124.8	122.7	122.7	122.7	124.8
52.5°	133.1	132.0	127.9	126.8	127.9	123.7	118.5	117.5	117.5	117.5	120.6
55°	127.9	125.8	123.7	121.6	123.7	118.5	114.4	112.3	112.3	114.4	116.4
57.5°	122.7	120.6	119.6	117.5	119.6	114.4	110.2	108.1	109.2	110.2	110.2
60°	117.5	115.4	114.4	112.3	115.4	110.2	106.0	105.0	105.0	104.0	104.0
62.5°	112.3	111.2	109.2	107.1	111.2	105.0	101.9	99.8	98.8	98.8	98.8
65°	106.0	105.0	104.0	102.9	105.0	99.8	96.7	95.6	93.6	92.5	93.6
67.5°	100.8	100.8	98.8	96.7	99.8	93.6	91.5	90.5	87.3	86.3	87.3
70°	94.6	94.6	92.5	91.5	95.6	87.3	85.3	84.2	82.1	81.1	81.1
72.5°	88.4	88.4	86.3	85.3	90.5	81.1	79.0	78.0	74.9	73.8	73.8
75°	82.1	81.1	80.1	79.0	85.3	74.9	71.7	69.7	66.5	65.5	64.5
77.5°	74.9	73.8	71.7	72.8	76.9	66.5	62.4	61.3	58.2	57.2	56.1
80°	65.5	64.5	63.4	65.5	65.5	58.2	53.0	50.9	47.8	45.7	44.7
82.5°	56.1	55.1	55.1	57.2	54.1	50.9	44.7	40.5	35.3	32.2	31.2
85°	45.7	47.8	45.7	47.8	40.5	40.5	31.2	23.9	16.6	13.5	12.5
87.5°	35.3	36.4	35.3	36.4	28.1	27.0	14.6	8.3	1.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2
2.5°	1996.1	1998.2	2042.9	2087.6	2114.7	2182.2	2215.5	2252.9	2272.7	2295.6
5°	1602.1	1641.6	1678.0	1767.4	1813.2	1920.2	1998.2	2123.0	2162.5	2193.7
7.5°	1210.2	1269.4	1314.1	1425.4	1511.7	1644.7	1780.9	1929.6	1972.2	2000.3
10°	961.7	1015.7	1100.0	1187.3	1284.0	1445.1	1592.8	1746.6	1821.5	1853.7
12.5°	807.8	894.1	992.9	1074.0	1150.9	1269.4	1456.6	1651.0	1729.0	1763.3
15°	666.4	763.1	864.0	963.8	1059.4	1193.5	1390.0	1642.7	1741.4	1775.7
17.5°	529.2	608.2	710.1	830.7	970.0	1140.5	1402.5	1731.0	1851.6	1896.3
20°	376.4	453.3	557.3	705.9	871.2	1085.4	1431.6	1864.1	2035.7	2086.6
22.5°	283.8	326.5	422.1	568.7	782.9	1041.7	1477.4	2046.0	2246.7	2292.4
25°	249.5	264.1	312.9	454.3	694.5	1002.2	1537.7	2226.9	2470.2	2520.1
27.5°	221.4	229.8	254.7	364.9	629.0	961.7	1609.4	2422.4	2662.6	2728.1
30°	199.6	210.0	230.8	305.7	565.6	903.5	1674.9	2598.1	2825.8	2875.7
32.5°	183.0	194.4	213.1	276.5	511.5	859.8	1712.3	2729.1	2965.1	3010.9
35°	171.5	181.9	200.7	250.6	463.7	829.6	1723.8	2859.1	3135.6	3182.4
37.5°	161.1	171.5	188.2	224.6	430.4	790.1	1741.4	3014.0	3333.1	3394.5
40°	153.9	162.2	177.8	206.9	384.7	747.5	1762.2	3194.9	3525.5	3586.8
42.5°	146.6	155.9	169.5	207.9	338.9	711.1	1775.7	3334.2	3678.3	3736.5
45°	140.4	150.8	166.3	203.8	304.6	677.9	1769.5	3450.6	3817.6	3862.3
47.5°	134.1	146.6	174.7	195.5	294.2	647.7	1774.7	3562.9	3917.4	3952.8
50°	130.0	145.6	187.1	183.0	296.3	634.2	1824.6	3697.0	3992.3	4005.8
52.5°	126.8	148.7	176.7	165.3	296.3	628.0	1920.2	3913.3	4122.2	4112.9
55°	121.6	147.6	165.3	149.7	283.8	631.1	2010.7	4199.2	4434.1	4382.2
57.5°	117.5	141.4	148.7	138.3	254.7	632.1	2144.8	4440.4	4679.5	4686.8
60°	112.3	151.8	128.9	128.9	218.3	626.9	2263.3	4436.2	4724.2	4772.0
62.5°	107.1	148.7	115.4	119.6	193.4	607.2	2335.1	4177.3	4558.9	4647.3
65°	100.8	117.5	106.0	111.2	183.0	558.3	2233.2	3856.1	4335.4	4430.0
67.5°	93.6	96.7	96.7	102.9	178.8	484.5	1976.4	3501.6	4054.7	4169.0
70°	85.3	86.3	88.4	97.7	166.3	416.9	1609.4	3124.2	3753.2	3897.7
72.5°	76.9	78.0	78.0	88.4	155.9	359.7	1139.5	2475.4	3133.5	3285.3
75°	67.6	68.6	67.6	76.9	136.2	269.3	676.8	1565.7	1869.3	2040.9
77.5°	57.2	57.2	55.1	60.3	93.6	170.5	370.1	951.3	1137.4	1243.4
80°	46.8	42.6	35.3	36.4	50.9	97.7	165.3	545.8	623.8	650.8
82.5°	31.2	23.9	14.6	13.5	16.6	27.0	38.5	216.2	198.6	188.2
85°	6.2	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)